

# **MASTER**® SAFETY DATA SHEET

## 1. Product Identification

Master Products  
4635 Willow Drive  
Medina, MN 55340  
(612) 478-2360

**Product line:** MASTER® Silicone DOT 5 Brake Fluid  
**Products:** DS12, DS32  
**CAS:** Not applicable (Mixture)  
**Synonyms:** Polydimethylsiloxane hydraulic fluid  
**Recommended use:** Disk and drum hydraulic brake fluid  
**Restrictions:** Do not use where DOT5 is specified  
**Created:** 14 June 2013  
**Revised:** 26 March 2015  
**Emergency phone:** CHEMTREC: (+1) 800-424-9300

## 2. Hazards Identification

**Appearance:** Purple liquid  
**Odor:** Mild  
**Classification(s):** Skin Irritation, Category 3  
Carcinogenicity, Category 2  
Aquatic Toxicity, Acute Category 3  
**Target organs:** None  
**Symbol(s):**



**Signal Word:** **Warning**  
**Hazard Statement(s):** (H315) Causes mild skin irritation. (H351) Suspected of causing cancer. (H402) Harmful to aquatic life.

**Other hazard(s):** Mildly irritating to the eyes and skin. Respiratory exposure is likely to cause irritation.

- Precaution(s):** Wear eye and skin protection before handling. Do not breathe mist/vapors/spray. Wear protective gloves/protective clothing. IF IN EYES: Flush with water for 15 minutes and consult a physician. Do not ingest. IF SWALLOWED: Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.
- Disposal:** Keep out of waterways. Check local, national, and international regulations for proper disposal
- HMS (estimated):**      **Health – 2**      **Fire – 1**      **Instability – 0**

### 3. Composition/Information on Ingredients

#### Hazardous Ingredients:

<i>Component</i>	<i>CAS No.</i>	<i>Conc (wt%)</i>
Polydimethylsiloxane	63148-62-9	90 – 100
Tributylphosphate	126-73-8	1 – 5
Additives	Proprietary	< 1

### 4. First Aid Measures

- Eyes** Remove contact lenses, if worn. Rinse with running water for at least 15 minutes, lifting upper and lower eyelids occasionally. Seek medical attention.
- Skin** Remove affected clothing and launder before reuse. Wash affected area for at least 15 minutes with soap and running water. If irritation occurs, consult a physician
- Inhalation** Inhalation is unlikely. If mists or sprays are inhaled, move victim to fresh air. If breathing is difficult, give artificial respiration and consult a physician.
- Ingestion** Do NOT induce vomiting. If a significant volume has been swallowed, consult a physician.
- Additional Info** Not determined
- Specific Treatments** Not determined. Treat symptomatically

### 5. Fire Fighting Measures

- NFPA (estimated):**      **Health – 2**      **Fire – 1**      **Instability – 0**

<b>Flash Point</b>	> 120°C / 248°F (calculated)
<b>Extinguishing Media</b>	For small fires use dry chemical or CO <sub>2</sub> . For large fires apply large (flooding) quantities of water from as far away as possible in a spray or mist, or use dry chemical or CO <sub>2</sub> .
<b>Unsuitable Media</b>	Not determined
<b>Firefighting Procedures:</b>	Wear a self-container breathing apparatus if necessary based on concentrations of smoke. Evacuate in accordance with emergency planning. Use water spray to keep containers cool
<b>Unusual Hazards</b>	Not Determined

## 6. Accidental Release Measures

**Personal precautions, protective equipment, and emergency procedures:**

Ventilate if released in a confined area. Avoid breathing mists/vapors/spray. Product may present slipping hazard if left on the floor.

**Environmental precautions:** Avoid release to the environment. Prevent from entering into soil, ditches, sewers, waterways or groundwater

**Methods for removal:** Use a fluid pump to remove bulk liquid. Residual liquid can be absorbed on inert material. Dispose of contaminated adsorbent as hazardous waste. Wash the area with water after excess product and adsorbent is removed.

## 7. Handling and Storage

**Max. Handling Temp:** Not determined

**Procedures:** Use in a well ventilated area. Avoid breathing mists/vapors/spray. Avoid handling hot product where possible. Use appropriate personal protective equipment to avoid contact with skin and eyes. Note the location of nearest emergency shower and eye wash station before use. Store with the lid tightly closed in a cool, dry, well-ventilated place. Do not store near oxidizers. Dispose of spilled or used material in accordance with local, regional, national, and international regulations.

**Max Store Temp:** Do not store or handle at elevated temperatures.

## 8. Exposure Controls/Personal Protection

### Exposure Limits

#### US

#### Guidelines by component

##### *Tributylphosphate*

OSHA TWA: 0.2ppm

ACGIH TWA: 0.2ppm

**Other Exposure Limits:** Not determined

**Engineering Controls:** Use in a well ventilated area. Local and general ventilation should keep methanol vapor concentration below permissible limits. Where exposure potential exceeds recommended limits, use a NIOSH/OSHA approved supplied air respirator as recommended.

### Personal Protective Equipment

#### Respiratory:

Use a NIOSH or CEN approved full-face respirator with multi-purpose combination or type ABEK respirator cartridges as a backup to engineering controls. If the respiratory is the only means of protection, use a full-face supplied air respirator

#### Eye:

Use tightly-fitting chemical splash goggles. Use face shield, especially where splashing is likely to occur

#### Gloves:

Use nitrile, butyl, viton, or fluoroelastemer gloves. Even appropriate materials may degrade after prolonged exposure with product.

#### Clothing:

Use chemical resistant pants and jackets, preferably of butyl or nitrile rubber

#### Other:

Locate the nearest eyewash station and safety shower before handling this product. Limit exposure whenever possible.

#### Hygiene:

Wash thoroughly after handling this product.

## 9. Physical and Chemical Properties

#### Appearance

Purple liquid

#### Odor

Mild

#### Odor threshold

Not determined

<b>pH</b>	Not determined
<b>Melting Point</b>	Not determined
<b>Initial Boiling Pt</b>	> 260°C / 500°F
<b>Flash Point</b>	> 120°C / 248°F
<b>Evaporation Rate</b>	Not determined
<b>Upper Flammable Lm</b>	Not determined
<b>Lower Flammable Lm</b>	Not determined
<b>Explosive Data</b>	Not determined
<b>Vapor Pressure</b>	Not determined
<b>Vapor Density</b>	Not determined
<b>Volatile Organics</b>	Not determined
<b>Density</b>	0.985 mg/cu. cm @25.0°C
<b>Solubility</b>	Insoluble in water and organic solvents
<b>K<sub>ow</sub></b>	Not determined
<b>Viscosity</b>	42.7 mm/s <sup>2</sup> @ 40°C
<b>Autoignition Point</b>	Not determined
<b>Decomposition Temp</b>	Not determined

## 10. Stability and Reactivity

<b>Stability</b>	Material is normally stable at ambient temperatures and pressures.
<b>Decomposition Temp</b>	Not determined
<b>Incompatibility</b>	Keep away from strong oxidizers and strong bases.
<b>Polymerization</b>	Will not occur
<b>Thermal Decomposition</b>	Primarily oxidizes to carbon dioxide and silicon dioxide in normal combustion conditions. In lower oxygen environments carbon monoxide, formaldehyde, or formic acid may be formed.
<b>Conditions to Avoid</b>	Keep away from strong oxidizers as reaction may occur

## 11. Toxicological Information

### - Acute Exposure -

<b>Eye Irritation</b>	May cause mild to moderate irritation of the eye if exposed to liquid or in high vapor concentrations. May cause irritation, tearing, or burning of the eyes.
<b>Skin Irritation</b>	Expected to be mildly irritating to the skin. Symptoms of irritation may include redness, drying, and cracking of the skin.
<b>Respiratory Irritation</b>	High vapor concentrations may cause transient irritation to the respiratory system.
<b>Dermal Toxicity</b>	This product can be absorbed through the skin. Limit exposure to skin where possible.
<b>Inhalation Toxicity</b>	Toxicity is similar to that for oral ingestion, though this exposure mode is far less likely to occur.

<b>Oral Toxicity</b>	Low order of toxicity, not expected to cause injury under normal exposure conditions.
<b>Aspiration Hazard</b>	This product is of low risk for aspiration due to viscosity. Do NOT induce vomiting, as this increases risk of aspiration.
<b>- Chronic Exposure -</b>	
<b>Chronic Toxicity</b>	This product may cause dryness or defatting of the skin, dermatitis, or may aggravate existing skin conditions.
<b>Carcinogenicity</b>	This product and its components are NOT listed by the IARC, NTP, ACGIH, or OSHA as carcinogens. Tributylphosphate in this product has been found tumorigenic in rats and mice (oral exposure) by RTECS criteria (Kidney, Ureter, Bladder, Liver).
<b>Mutagenicity</b>	No data available
<b>Reproductive Toxicity</b>	Not likely based on exposure to product. Tributylphosphate in this product has been linked to growth abnormalities in newborn rats (oral)
<b>Teratogenicity</b>	Not likely based on exposure to product. Tributylphosphate in this product has been linked to fetotoxicity in rats (oral)
<b>- Additional Information -</b>	
<b>Target organ toxicity</b>	Product is does not exhibit specific organ toxicity. Tributylphosphate in this product has been linked to tumors of the bladder, kidney, ureter, and liver in rats and mice.
<b>Synergistic effects</b>	No data available
<b>Pharmacokinetics</b>	No data available

## 12. Ecological Information

### - Environmental Toxicity -

<b>Freshwater Fish</b>	Acute LC50 > 170 mg/L (96h, goldfish)
<b>Freshwater Invertebrates</b>	Acute EC50 > 70mg/l (48h, water flea)
<b>Algae</b>	Acute EC50 > 20mg/l (72h, green algae)
<b>Saltwater Fish</b>	Not determined
<b>Saltwater Invertebrates</b>	Not determined
<b>Bacteria</b>	Not determined
<b>Miscellaneous</b>	Not determined

### - Environmental Fate -

<b>Biodegradation</b>	No data available. Expected to have little to no biodegradation potential and likely to degrade primarily through photochemical oxidation
<b>Bioaccumulation</b>	Product adheres to soil and is unlikely to be absorbed by organisms. Tributylphosphate in this product has an BCF of 21 – 35.
<b>Soil Mobility</b>	Product tightly adsorbs to soil, slowly evaporates and oxidizes at environmentally relevant temperatures

**Other Effects**                      Not determined

### 13. Disposal Considerations

#### Disposal Considerations

All disposal practices must be in accordance with local, regional, national, and international regulations. Store material for disposal as indicated in Section 7. Disposal by controlled incineration or by secure land fill may be acceptable – review applicable regulations or regulatory bodies before making disposal decisions.

#### Contaminated Containers or Packaging

Do NOT weld, cut, or grind empty containers. Dispose of empty containers in accordance with local, regional, national, and international regulations

### 14. Transportation Information

Description shown may not apply to all shipping situations. Consult applicable shipping codes to determine any additional shipping requirements

**US DOT**                              Not dangerous goods

**IMDG**                                Not dangerous goods

**ICAO/IATA**                        Not dangerous goods

### 15. Regulatory Information

#### - Global Chemical Inventories/Regulations -

<b>USA</b>	All components of this material are on the US TSCA
<b>Other TSCA Reg.</b>	None known
<b>EU</b>	No information available
<b>New Zealand</b>	May require notification before sale under New Zealand Regulations
<b>Canada</b>	No information available
<b>Canada WHMIS</b>	Not determined

#### - Other U.S. Federal Regulations -

<b>SARA Ext. Haz. Subst.</b>	No components listed as Extremely Hazardous Substances list. See 40 CFR 355
<b>SARA Sect. 313</b>	No components of this product are subject to reporting under SARA Title III, Section 313. See 40 CFR 372

<b>SARA 311/312 Class</b>	<i>Acute Hazard</i>	- YES
	<i>Chronic Hazard</i>	- NO
	<i>Fire Hazard</i>	- NO
	<i>Reactivity Hazard</i>	- NO

**CERCLA Haz. Sub.** No components listed. See 40 CFR 302

**- State Regulations -**

**CA Prop 65** This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

<i>Right to Know Component</i>	<i>Right to Know States</i>
Polydimethylsiloxane (CAS # 63148-62-9)	NJ, PA
Tributylphosphate (CAS # 126-73-8)	MA, PA, NJ, LA

**- Other -**

**16. Other Information**

Revision updates may be in many sections and the MSDS should be read in its entirety. Prepared according to the UN Globally Harmonized System for the Classification and Labeling of Chemicals (GHS).

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